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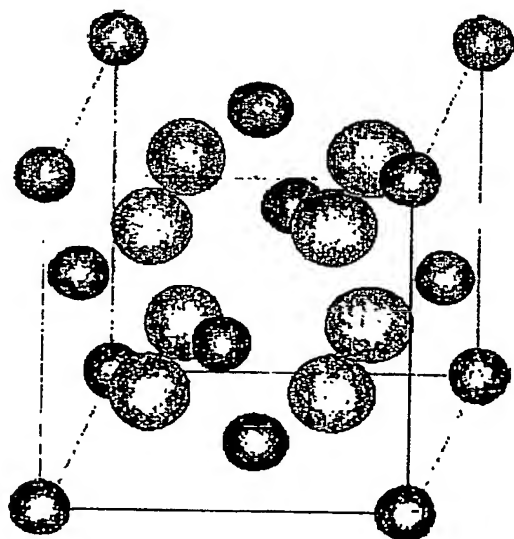
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- (54) Title: **HYDROGEN STORAGE MATERIAL WITH HIGH STORAGE CAPACITY**



(57) **Abstract:** Disclosed is a hydrogen storage material comprising a magnesium hydride. Said magnesium is stabilized in the fluorite structure. Preferably, the magnesium is at least partly substituted by an element such that the magnesium hydride is stabilized in the fluorite structure. In an advantageous embodiment, the hydrogen storage material also comprises a catalytically active material. Furthermore, an electrochemically active material, as well as an electrochemical cell comprising the above hydrogen storage material are disclosed.